

## CERTIFICATE

The attachment of this certificate is a copy of the following patent application submitted to this office:

Filing Date: 2003 10 20

Application No.: 200320117134.9

Type of Invention: Utility Model

Title of the Invention: A Safety Electric Heating Cooker with Interlaid Backstops

Applicant: Elec-Tech International Co., Ltd.

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Director of the State Intellectual Property Office  
of the People's Republic of China:

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December 19, 2003

## **A Safety Electric Heating Cooker with Interlaid Backstops**

### Technical Field

This utility model relates to a safety electric heating cooker with interlaid  
5 backstops.

### Background of the Utility Model

The outer shells of many kitchen appliances such as electric frying pans, etc.  
are made of plastics which is not heat-resistant, while the temperature of the  
cooker bowl for accommodating food is rather high during cooking. If the outer  
10 shell is made of common material, it can not withstand for direct contact with the  
cooker bowl, and it will not pass the safety criterion. If the outer shell is made of  
heat-resistant material, the production cost will be rather high.

### Summary of the Utility Model

The main object of the present utility model is to provide a safety electric  
15 heating cooker with interlaid backstops, which has a decreased production cost  
and an increased safety performance.

The aim of the present utility model is achieved by following technical  
scheme:

The present utility model comprises an outer shell and a cooker bowl,  
20 characterized in that, heat-resistant backstops are installed at the bottom of said  
cooker bowl.

One typical structure is as follows: Said cooker bowl is shrinked radially at its  
bottom part, where are installed heat-resistant backstops, air gap is generated  
between said outer shell and said cooker bowl by said heat-resistant backstops.

25 Said backstops may be installed at the bottom of the inner side of said outer  
shell.

Said cooker bowl is shrinked radially at its bottom part in the shape of a step  
or a conical cylinder. Said heat-resistant backstops are made of heat-resistant  
materials, they may be in the form of a ring or be constructed by a serial separate  
30 blocks. Said cooker bowl is supported by the heat-resistant backstops on its step

or on the surface of the conical cylinder. Air gap is generated between said outer shell and said cooker bowl, whereby prevents the non heat-resistant outer shell from contacting directly with the hot cooker bowl 22.

#### Brief Description of the Drawings

5 Fig. 1 is a schematic view of the present utility model illustrating the step-shaped cooker bowl;

Fig. 2 is a schematic view of the present utility model illustrating the cooker bowl which is in the shape of a conical cylinder;

10 Fig. 3 is a schematic view showing the heat-resistant ring-shaped backstop adopted in the present utility model;

Fig. 4 is a schematic view showing the heat-resistant annually distributed backstops adopted in the present utility model.

#### Detailed Description of the Preferred Embodiments

##### Embodiment 1:

15 The present utility model comprises an outer shell and a cooker bowl, characterized in that, heat-resistant backstops are installed at the bottom of said cooker bowl.

One typical structure is as follows: Said backstops may be installed at bottom of the inner side of said outer shell.

20 Said cooker bowl 2 is shrinked radially at its bottom part, where are installed heat-resistant backstops, air gap is generated between said outer shell and said cooker bowl by said heat-resistant backstops.

Said cooker bowl 2 may be shrinked radially at its bottom part which is in the shape of a step or a conical cylinder. Said heat-resistant backstop may be in the form of a ring 6 or constructed by a serial separate blocks 7 distributed annularly. Said cooker bowl is supported by the heat-resistant backstop on its step or on the surface of the conical cylinder. Air gap is generated between the outer shell and the cooker bowl, whereby prevents the non heat-resistant outer shell 5 from contacting directly with the hot cooker bowl.

30 Either the ring-shaped backstop (6) or the block-like backstops (7) may be

used in the cooker bowl (2) which is in the shape of a step or a conical cylinder.

#### Embodiment 2:

Another typical structure is as follows: Said backstops may be installed at the bottom of the inner side of said outer shell. Said heat-resistant backstop may be in the form of a ring 6 or constructed by a serial separate blocks 7 distributed annularly.

#### Claims

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What is claimed is:

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1. A safety electric heating cooker with interlaid backstops comprises an outer shell and a cooker bowl, characterized in that, heat-resistant backstops are installed at the bottom of said cooker bowl, whereby air gap is generated between said outer shell and said cooker bowl.

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2. A safety electric heating cooker with interlaid backstops according to claim 1, characterized in that, said cooker bowl is shrinked radially at its bottom part which is in the shape of a step; said heat-resistant backstop may be in the form of a ring or constructed by a serial separate blocks; said cooker bowl is supported by the heat-resistant backstop on its step or on the surface of the conical cylinder, whereby air gap is generated between the outer shell and the cooker bowl.

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3. A safety electric heating cooker with interlaid backstops according to claim 1, characterized in that, said cooker bowl is shrinked radially at its bottom part which is in the shape of a conical cylinder; said heat-resistant backstop may be in the form of a ring or constructed by a serial separate blocks; said cooker bowl is supported by the heat-resistant backstop on its step or on the surface of the conical cylinder, whereby air gap is generated between the outer shell and the cooker bowl.

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4. A safety electric heating cooker according to claim 1, characterized in that, said backstops are installed at the bottom of the inner side of said outer shell.

# 证 明

本证明之附件是向本局提交的下列专利申请副本

申 请 日： 2003. 10. 20

申 请 号： 2003201171349

申 请 类 别： 实用新型

发明创造名称： 内支撑安全电热锅

申 请 人： 广东德豪润达电气股份有限公司

发明人或设计人： 王冬雷

中华人民共和国  
国家知识产权局局长

王 景 川

2003 年 12 月 19 日

## 权 利 要 求 书

- 1、内支撑安全电热锅，包括锅体及外壳，其特征在于：在锅体的下部设置有耐热支撑件，所述耐热支撑件使锅体和外壳体之间形成空气间隙。
- 2、根据权利要求 1 所述的所述内支撑安全电热锅，其特征在于：锅体的下部变径收缩呈一个台阶状，所述耐热支撑件为用耐温材料成的环形件或分开的一系列支撑块，耐热支撑件在锅体台阶处或锥形处将锅体卡位并支撑牢固，从而使锅体和外壳体之间形成空气间隙。
- 3、根据权利要求 1 所述的所述内支撑安全电热锅，其特征在于：锅体的下部变径收缩呈锥形状，所述耐热支撑件为用耐温材料成的环形件或分开的一系列支撑块，耐热支撑件在锅体台阶处或锥形处将锅体卡位并支撑牢固，从而使锅体和外壳体之间形成空气间隙。
- 4、根据权利要求 1 所述的所述内支撑安全电热锅，其特征在于：所述支撑件设置于外壳体内侧底部。

# 说明书

## 内支撑安全电热锅

### 技术领域

本实用新型涉及一种内支撑安全电热锅。

### 背景技术

电炸锅等许多家庭厨房炊具外壳体都是用不耐温的塑料制成的，盛放食物的锅体温度又比较高，普通材料的壳体则无法与之接触，无法通过安全认证。若都用耐高温的材料，成本又很高。

### 实用新型内容

本实用新型的目的是提供一种既节约了成本又提高了产品的安全性的内支撑安全电热锅。

本实用新型的上述目的是采用如下技术方案予以实现的：

本实用新型包括锅体及外壳，其特征在于：在锅体的下部设置有耐热支撑件。

一种典型的结构是：锅体的下部变径收缩，在所述变径收缩处，设置有耐热支撑件，所述耐热支撑件使锅体和外壳体之间形成空气间隙。

所述支撑体可设置于外壳体内侧底部。

所述锅体的下部变径收缩可呈一个台阶状或锥形状，所述耐热支撑件为用耐温材料成的环形件或分开的一系列支撑块，耐热支撑件在锅体台阶处或锥形处将锅体卡位并支撑牢固，从而使锅体和外壳体之间形成空气间隙，避免不耐高温的外壳体和热的锅体接触。

### 附图说明

图1为本实用新型锅体呈台阶状收缩的结构示意图

图 2 为本实用新型锅体呈锥形状收缩的结构示意图

图 3 为本实用新型采用的耐温环形支撑件结构示意图

图 4 为本实用新型采用的耐温支撑件环形分布结构示意图

具体实施方式

以下结合附图及实施方式详述本实用新型

实施方式 1:

如图所示: 本实用新型包括锅体及外壳, 其特征在于: 在锅体的下部设置有耐热支撑件。

一种典型的结构是: 所述支撑体可设置于外壳体内侧底部。

锅体 2 的下部变径收缩, 在所述变径收缩处, 设置有耐热支撑件, 所述耐热支撑件使锅体和外壳体之间形成空气间隙。

所述锅体 2 的下部变径收缩可呈一个台阶状或锥形状, 所述耐热支撑件为用耐温材料制成的环形件 6 或分开的一系列环状分布的支撑块 7, 耐热支撑件在锅体台阶处或锥形处将锅体卡位并支撑牢固, 从而使锅体和外壳体之间形成空气间隙, 避免不耐高温的外壳体 5 和热的锅体接触。

环形件(6)和一系列支撑块(7)均可以用在带台阶的锅体(2)上, 也可以用在锥形锅体(2)上。

实施方式 2:

本实用新型的另一种典型的结构是: 所述支撑体可设置于外壳体内侧底部。耐热支撑件为用耐温材料制成的环形件 6 或分开的一系列环状分布的支撑块 7。



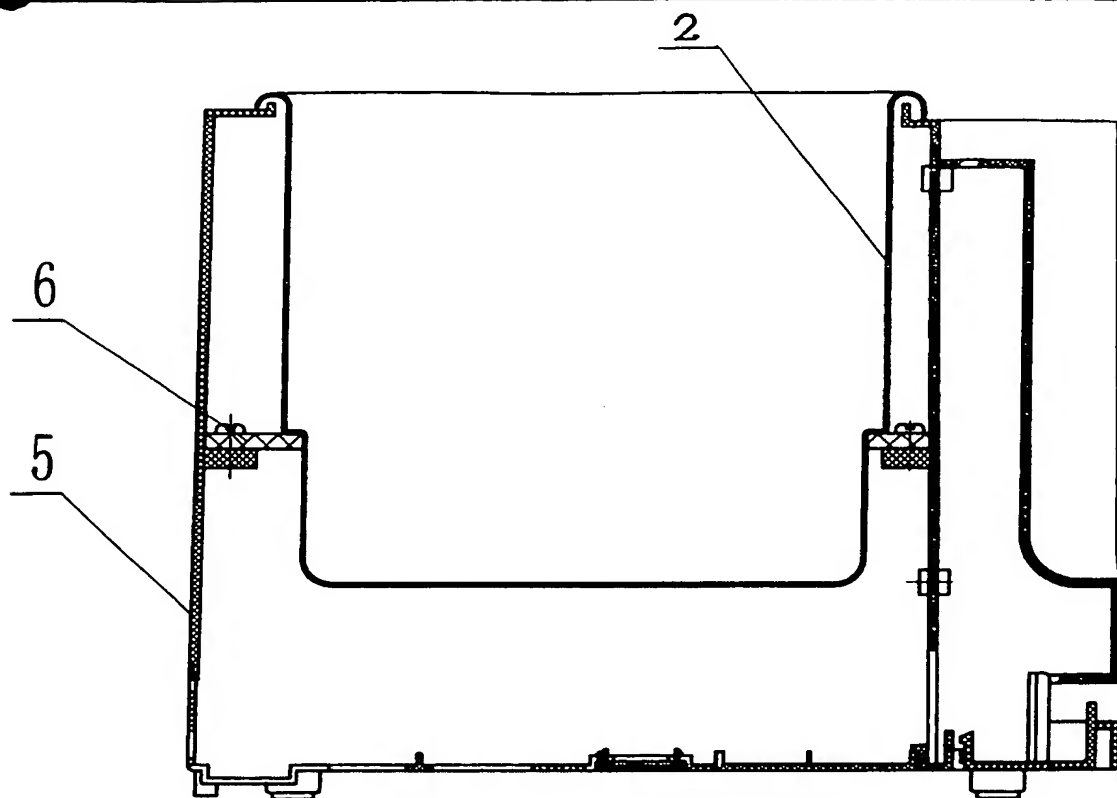


图 1

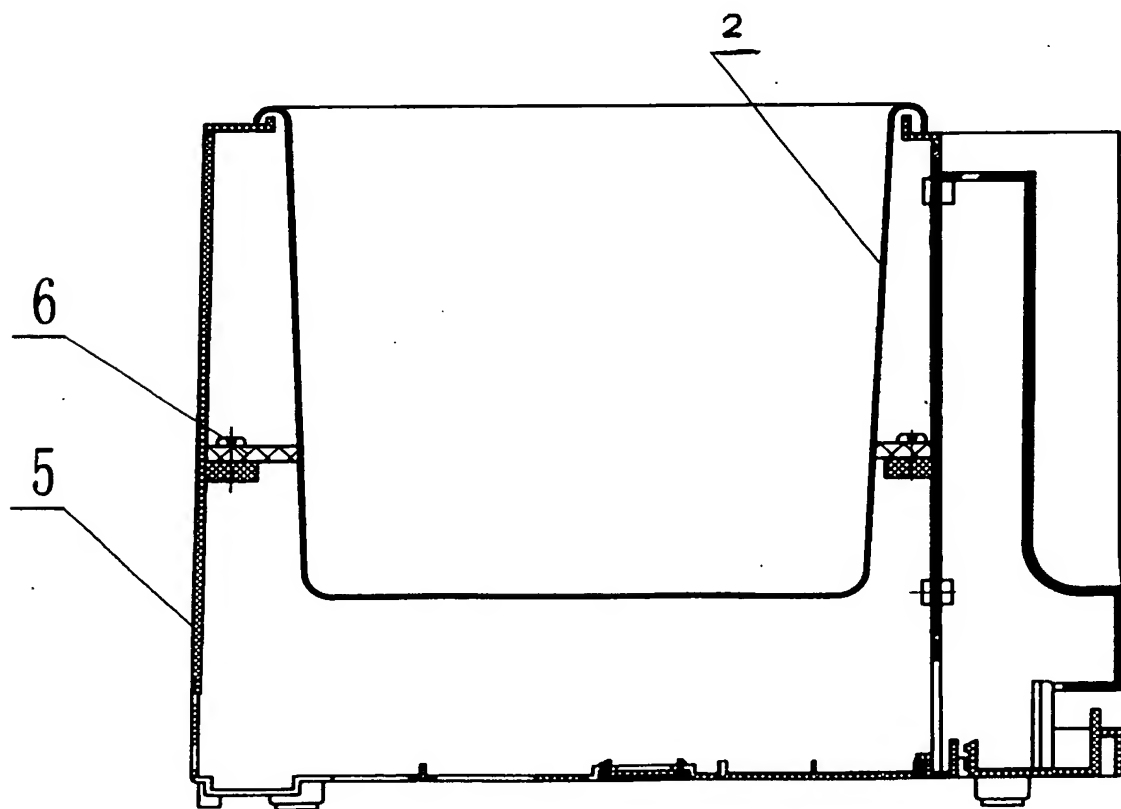


图 2

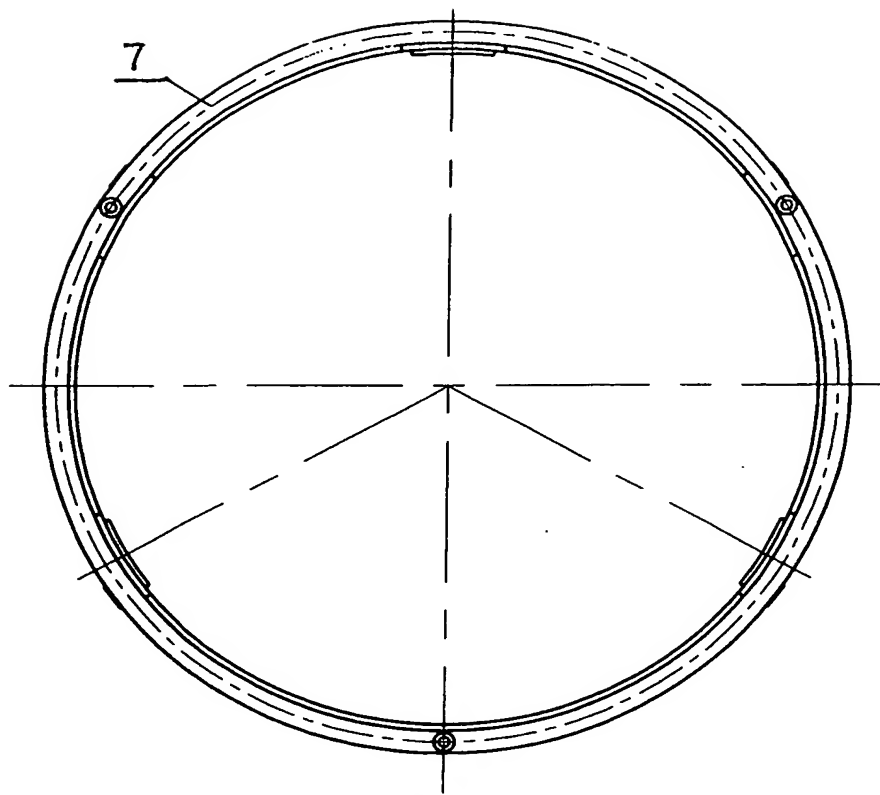


图 3

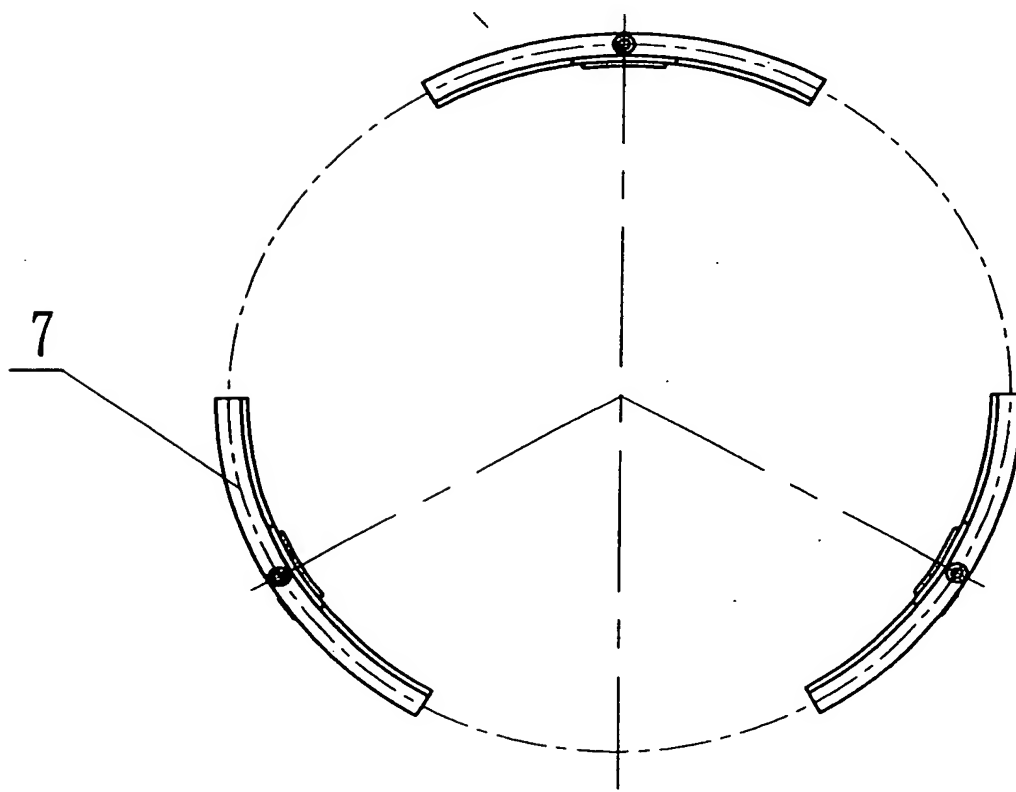


图 4